|   | Туре | L # | Hits | Search Text   | DBs  | Time<br>Stamp        | Comment |
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| 1 | BRS  | L1  | 585  | 310/340   | USPAT  | 2007/05/2<br>2 08:42 |         |
| 2 | BRS  | L2  | 618  | 310/344   | USPAT  | 2007/05/2<br>2 08:57 |         |
| 3 | BRS  | L3  | 1358 | 310/348   | USPAT  | 2007/05/2<br>2 09:20 |         |
| 4 | IS&R | L4  | 157  | (310/348).CCLS.   | US-<br>PGPUB   | 2007/05/2<br>2 09:23 |         |
| 5 | IS&R | L5  | 50   | (310/340,344).CCLS.   | US-<br>PGPUB   | 2007/05/2<br>2 09:25 |         |
| 6 | IS&R | L6  | 141  | (310/340,344).CCLS.   | FPRS;<br>EPO;<br>JPO;<br>DERWE<br>NT;<br>IBM_T<br>DB | 2007/05/2<br>2 09:29 |         |
| 7 | IS&R | L7  | 352  | (310/348).CCLS.   | FPRS;<br>EPO;<br>JPO;<br>DERWE<br>NT;<br>IBM_T<br>DB | 2007/05/2<br>2 09:38 |         |
| 8 | BRS  | L8  | 760  | piezoelectric and<br>substrate and (cover<br>or lid or top) adj5<br>(through adj1 hole or<br>via) |  | 2007/05/2<br>2 09:59 |         |

|   | Туре | L  | # | Hits | Search Text                     | DBs | Time<br>Stamp        | Comment |
|---|------|----|---|------|---------------------------------|-----|----------------------|---------|
| 9 | BRS  | L9 |   | 717  | (moisture or halogen)<br>not 18 |     | 2007/05/2<br>2 09:59 |         |



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Search Results 05/22/2007 - 13:02:37

Search

Query:

((cover or lid or top or resin)) <AND> (

Query: ((cover or lid or top or resin)) <AND> ( ( (piezoelectric or electronic) ) <in> abstract ) <AND> ( ( (via or "through hole") ) <in> claims )

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289 documents out of 1912372 matched your query. Click on its number to view the details of the document.

**Note:** All document detail pages now appear on a new Browser Window.

| 1. | <u>2250912</u> | HOUSING FOR AN ELECTRONIC CIRCUIT IMPLEMENTABLE IN AN ELECTRONIC CARD, AND A METHOD OF MANUFACTURING SUCH A CARD | 87% |
|----|----------------|--|-----|
| 2. | 2023070        | ELECTRONIC CIRCUIT PACKAGE AND PRODUCTION THEREOF  | 85% |
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| 4. | 2556986        | CABINET WITH CROSS-CONNECT THAT PROVIDES ACCESS TO REAR SIDE OF ELECTRONIC EQUIPMENT                             | 82% |
| 5. | <u>2540154</u> | IMPROVEMENTS IN HEAT DISSIPATION FOR ELECTRONIC ENCLOSURES   | 82% |
| 6. | 2509312        | MEDIA CENTER   | 82% |
| 7. | 2378282        | MICROFIBER DIELECTRICS WHICH FACILITATE LASER VIA DRILLING   | 82% |



**IP SERVICES** 

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Patent Search

Results of searching in PCT for: piezoelectric and substrate and (cover or lid or top or resin ) near ("through hole" or via\*): 4 records

Showing records 1 to 4 of 4:

[Search Summary]

Refine Search

piezoelectric and substrate and (cover or lid or top or re



RSS 5

Title

Pub. Date

Int. Class

**Applicant** 

1. (WO 2006/047042) PIEZOELECTRIC **ISOLATING TRANSFORMER** 

04.05.2006 H01L 41/08 AGILENT TECHNOLOGIES, INC.

The piezoelectric isolating transformer (20) is characterized by an operating frequency range and includes a resonant structure (21) having at least one mechanical resonance in the operating frequency range. The resonant structure has an insulating substrate (30), a first electro-acoustic transducer (40) and a second electro-acoustic transducer (50). The substrate has a first major surface and a second major surface opposite the first major surface. The first electro-acoustic transducer is mechanically coupled to the first major surface. The second electro-acoustic transducer is mechanically coupled to the second major surface. One of the transducers (40, 50) is operable to convert input electrical power in the operating frequency range to ...

2. (WO 2004/095489) INSERTING-FINGER LIQUID METAL RELAY

04.11.2004

H01H 55/00

AGILENT TECHNOLOGIES, INC.

An electrical relay comprising having two wettable electrical contacts (118, 120) supporting a conducting liquid (126). A non-wettable switch finger (114) is moved between first and second positions between the electrical contacts by action of an actuator (130, 132 or 140). In the first position the switch finger permits the conducting liquid (126) to bridge the gap between the contacts (118, 120) and complete an electrical circuit between the contacts. In the second position the switch finger separates the conducting liquid into two volumes, breaking the electrical circuit between the contacts. The switch finger may be located at the free end of a beam (112) that is deflected or bent by the action of piezoelectric elements (130, 132 or 140...

3. (WO 2004/095483) WETTING FINGER LATCHING PIEZOELECTRIC RELAY

04.11.2004

H01H 57/00

AGILENT TECHNOLOGIES, INC.

An electrical relay having two wettable electrical contacts (118 and 120), each supporting a conducting liquid (126). A wettable switch finger (114) is moved from a non-deflected position to first and second positions by action of an actuator (130, 132 or 140). In the first position the switch finger (114) touches the conducting liquid (126) and causes it to wet between the contacts and the switch and thereby complete an electrical circuit between the contacts. When the switch finger (114) is in the second position, the conducting liquid (126) cannot wet between first and second contacts and the switch finger and the electrical circuit between the first and second contacts is broken. The switch finger (114) may be located at the free end of...

4. (WO 2003/089138) MICROFLUIDIC DEVICE

30.10.2003

F04B 43/04

UNIVERSITY OF HERTFORDSHIRE HIGHER EDUCATION CORPORATION

A microfluidic device which is actuated by a piezo electric actuator. A microfluidic structure which comprises sequentially (i) a substrate through which there are a plurality of conduits (ii) a first layer of elastomeric material having a flat face and a patterned face having recesses formed therein, the flat face being bonded to the substrate and there being holes through the elastomeric layer connected to the recesses and aligned with the conduits in the substrate (iii) a second layer of a flexible material overlaying the patterned face of the elastomeric so that the holes and recesses in the elastomeric layer and the conduits in the substrate form channels through which fluid can flow (iv) an actuating means for driving a sealing means ...

Search Summary

RSS 🕥

niaznalantric NEAR "through hola". A occurrences in A records



**IP SERVICES** 

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es PatentScope

Patent Search

Results of searching in PCT for: electronic and substrate and ( cover or lid or top or resin ) near ( "through hole" or via\* ) and ( moisture or halogen ): 1 record

Showing record 1 to 1 of 1:

[Search Summary]

Refine Search

electronic and substrate and (cover or lid or top or resin



Title

Pub. Date

Int. Class

Applicant

1. (WO 2001/001740) MICROFIBER DIELECTRICS WHICH FACILITATE LASER VIA DRILLING

04.01.2001

H05K 1/03

ALLIEDSIGNAL INC.

This invention concerns **electronic** substrates comprising a non-woven filler material cousisting primarily of micro-fiber glass, and a **resin** material. The present invention also includes **electronic** products manufactured from the **electronic** substrates of this invention including, but not limited to prepregs (16, 18), metal clad laminates, and printed wiring boards with and without lased **via** holes (20). The present invention further includes a method of manufacturing printed built-up wiring boards including the steps of forming a prepreg (16, 18) and forming at least one **via** (20) in the prepreg (16, 18).

### Search Summary

RSS 50

electronic NEAR "through hole": 0 occurrences in 0 records.

substrate NEAR "through hole": 0 occurrences in 0 records.

(electronic NEAR "through hole" AND substrate NEAR "through hole"): 0 records.

cover NEAR "through hole": 0 occurrences in 0 records.

lid NEAR "through hole": 0 occurrences in 0 records.

(cover NEAR "through hole" OR lid NEAR "through hole"): 0 records.

top NEAR "through hole": 0 occurrences in 0 records.

((cover NEAR "through hole") OR lid NEAR "through hole") OR top NEAR "through hole"): 0 records.

resin NEAR "through hole": 0 occurrences in 0 records.

(((cover NEAR "through hole" OR lid NEAR "through hole") OR top NEAR "through hole") OR resin NEAR "through hole"): 0 records.

((electronic NEAR "through hole" AND substrate NEAR "through hole") AND (((cover NEAR "through hole" OR lid NEAR "through hole") OR top NEAR "through hole") OR resin NEAR "through hole")): 0 records.

electronic NEAR via\*: 15776 occurrences in 7309 records.

substrate NEAR via\*: 15764 occurrences in 6815 records.

(electronic NEAR via\* AND substrate NEAR via\*): 144 records.

cover NEAR via\*: 2831 occurrences in 1574 records.

lid NEAR via\*: 1039 occurrences in 565 records.

(cover NEAR via\* OR lid NEAR via\*): 2116 records.

top NEAR via\*: 7833 occurrences in 4407 records.

((cover NEAR via\* OR lid NEAR via\*) OR top NEAR via\*): 6370 records.

resin NEAR via\*: 2541 occurrences in 1558 records.

(((cover NEAR via\* OR lid NEAR via\*) OR top NEAR via\*) OR resin NEAR via\*): 7900 records.

((electronic NEAR via\* AND substrate NEAR via\*) AND (((cover NEAR via\* OR lid NEAR via\*) OR top NEAR via\*) OR resin NEAR via\*)): 21 records.

(((electronic NEAR "through hole" AND substrate NEAR "through hole") AND (((cover NEAR "through hole" OR lid NEAR "through hole") OR top NEAR "through hole") OR resin NEAR "through hole")) OR ((electronic NEAR via\* AND substrate NEAR via\*) AND (((cover NEAR via\* OR lid NEAR via\*)) OR top NEAR via\*)) OR resin NEAR via\*))): 21 records.

moisture: 418280 occurrences in 71935 records.

**RESULT LIST** 

Approximately 197 results found in the Worldwide database for:

piezoelectric or electronic in the title AND resin and via\* and substrate in the title or abstract
(Results are sorted by date of upload in database)

1 ELECTRONIC COMPONENT AND PRODUCTION METHOD THEREOF

Inventor: TAOKA MIKIO; KUMEJI YASUSHI; (+1)

Applicant: MATSUSHITA ELECTRIC IND CO LTD (JP);

TAOKA MIKIO; (+2)

EC: IPC: H01F27/29; H01F17/00; H01F27/29 (+1)

Publication info: WO2007055303 - 2007-05-18

2 Electronic component, mounted structure, electro-optical device, and

electronic device

Inventor: SAITO ATSUSHI (JP); TANAKA SHUICHI (JP) Applicant: SEIKO EPSON CORP (JP)

EC: H01L23/485B IPC: H01L23/12; H01L21/60; H01L23/485 (+4)

Publication info: TW263251B - 2006-10-01

3 PIEZOELECTRIC RESONATOR

Inventor: FURUE JUNJI (JP); MURAHASHI MASATO (JP); Applicant: KYOCERA CORP (JP); FURUE JUNJI (JP);

(+1) (+2)

EC: IPC: H03H9/02; H01L41/09; H03H9/17 (+3)

Publication info: WO2007026428 - 2007-03-08

4 ELECTRONIC MODULE

Inventor: TANAKA SHUICHI Applicant: SEIKO EPSON CORP

EC: IPC: H01L21/60; H01L21/02

**Publication info: JP2007019409** - 2007-01-25

5 PACKAGE FOR ELECTRONIC COMPONENT

Inventor: KOMATSU TAKATSUGU; TANAKA TADASHIGE Applicant: NIPPON MICRON KK

EC: IPC: H01L23/12; H01L23/12

Publication info: JP2007005741 - 2007-01-11

6 ELECTRONIC CIRCUIT MODULE

Inventor: ISHIKAWA KAZUYA Applicant: ALPS ELECTRIC CO LTD

EC: IPC: H01L21/60; H01L23/12; H01L21/02 (+1)

Publication info: JP2007005559 - 2007-01-11

7 MOUNTING METHOD OF ELECTRONIC COMPONENT

Inventor: NAKATSUGI KYOICHIRO; TOSHIOKA Applicant: SUMITOMO ELECTRIC INDUSTRIES

HIDEAKI; (+1)

EC: IPC: H01L21/60; H05K3/32; H01L21/02 (+1)

Publication info: JP2007005557 - 2007-01-11

8 PIEZOELECTRIC DEVICE

Inventor: CHIBA SEIICHI Applicant: SEIKO EPSON CORP

EC: IPC: H03H9/02; H01L23/02; H01L25/04 (+11)

Publication info: JP2006340035 - 2006-12-14

ELECTRONIC COMPONENT BONDING DEVICE

Inventor: NEHASHI TORU Applicant: ATHLETE FA KK

EC: IPC: H01L21/60; H01L21/02

Publication info: JP2006324579 - 2006-11-30

10 ELECTRONIC COMPONENT, RESIN SEALING METHOD OF ELECTRONIC COMPONENT AND RESIN SEALING DEVICE

Inventor: ARAKI KYOICHI; OKAMOTO HIROTAKA; (+2) Applicant: TOWA CORP

Publication info: KR20010087175 - 2001-09-15

#### **RESULT LIST**

23 results found in the Worldwide database for:

piezoelectric in the title AND resin and "through hole" in the title or abstract

(Results are sorted by date of upload in database)

RESIN SEALING SEMICONDUCTOR DEVICE, PIEZOELECTRIC OSCILLATOR, AND MANUFACTURING METHOD THEREOF

Inventor: SHIMODAIRA KAZUHIKO

Applicant: SEIKO EPSON CORP

EC:

IPC: H01L23/28; H01L21/56; H01L41/09 (+9)

Publication info: JP2006049547 - 2006-02-16

PIEZOELECTRIC COMPONENT AND ITS MANUFACTURING METHOD. **COMMUNICATIONS EQUIPMENT** 

Inventor: KOSHIDO YOSHIHIRO; IWAMOTO TAKASHI

Applicant: MURATA MANUFACTURING CO

IPC: H01L41/09; H01L21/60; H01L41/08 (+28)

Publication info: JP2005130341 - 2005-05-19

PIEZOELECTRIC VIBRATION DEVICE

Inventor: SATO SHUNSUKE

Applicant: DAISHINKU CORP

EC:

IPC: H03H9/02; H03H9/10; H03H9/02 (+3)

Publication info: JP2004320297 - 2004-11-11

SURFACE-MOUNTED TYPE PIEZOELECTRIC DEVICE AND

MANUFACTURING METHOD THEREFOR Inventor: TAIRA TOSHIYUKI; MATSUKI KIYOTAKA;

Applicant: TOYO COMMUNICATION EQUIP

(+2)

EC:

IPC: H03H3/02; H03H9/02; H03H3/00 (+3)

Publication info: JP2003087071 - 2003-03-20

PIEZOELECTRIC ACTUATOR AND MANUFACTURING

Inventor: INADA YUTAKA; MINAMI NOBUYUKI

Applicant: TAIHEIYO CEMENT CORP

IPC: H01L41/083; H01L41/22; H01L41/083 (+2)

IPC: F04B9/00; F04B45/047; H02N2/00 (+5)

Publication info: JP2001148521 - 2001-05-29

PIEZOELECTRIC ACTUATOR

Inventor: SUZUKA JUNICHI; SAKURAI TAKAYUKI; (+3) Applicant: NGK SPARK PLUG CO; HONDA MOTOR CO

Publication info: JP2000287468 - 2000-10-13

Publication info: JP2000036716 - 2000-02-02

PIEZOELECTRIC OSCILLATOR

Inventor: SHISHIDO YOSHINOBU Applicant: TOYO COMMUNICATION EQUIP

EC:

PIEZOELECTRIC VIBRATOR AND ITS PRODUCTION

Inventor: NOGUCHI KATSUHIKO

Applicant: CITIZEN ELECTRONICS

EC:

IPC: H03H9/02; H03H3/02; H03H9/10 (+9)

IPC: H03B5/32; H03H9/02; H03B5/32 (+3)

Publication info: JP11103231 - 1999-04-13

PIEZOELECTRIC OSCILLATOR AND ITS PRODUCTION

Inventor: NOGUCHI KATSUHIKO

Applicant: CITIZEN ELECTRONICS

EC:

IPC: H03H9/02; H03H3/02; H03H9/10 (+9)

Publication info: JP11103230 - 1999-04-13

SURFACE MOUNT SUBSTRATE FOR ELECTRONIC PARTS AND PIEZOELECTRIC OSCILLATOR USING THE SAME

Inventor: MIZUMURA HIROAKI; MORIYA KOICHI

Applicant: NIHON DEMPA KOGYO CO

EC:

IPC: H01L23/12; H03B5/32; H05K1/02 (+9)

#### **RESULT LIST**

16 results found in the Worldwide database for:

**piezoelectric or electronic** in the title AND **resin and via and moisture** in the title or abstract (Results are sorted by date of upload in database)

1 ELECTROOPTICAL DEVICE AND ELECTRONIC EQUIPMENT

Inventor: KODA TOYOSHI; HAYASHI KENJI

Applicant: SEIKO EPSON CORP

EC:

IPC: H05B33/04; G09F9/30; H01L51/50 (+11)

Publication info: JP2005091874 - 2005-04-07

2 Electronic energy-storage luminous character and preparation method

Inventor: ZHU BINGZHU (CN)

Applicant: ZHU BINGZHU (CN)

EC:

IPC: G09F13/00; G09F13/22; G09F13/00 (+3)

Publication info: CN1372236 - 2002-10-02

3 MOUNTING STRUCTURE FOR ELECTRONIC COMPONENT

Inventor: ISHIKAWA TOMONORI; OGISO HOMARE

Applicant: DENSO CORP

EC:

IPC: H05K3/28; H01L21/60; H05K1/18 (+6)

Publication info: JP2001085823 - 2001-03-30

4 Adhesive tape for continuously arranging electronic parts

Inventor: NAGASAKI KUNIO (JP); ICHIKAWA HIROKI

Applicant: NITTO DENKO CORP (JP)

(JP); (+2)

EC:

IPC: C09J7/02; C09J123/08; C09J131/04 (+8)

Publication info: TW445290B - 2001-07-11

5 ELECTRONIC COMPONENT

**Inventor: YAMAMOTO KEIZO** 

Applicant: MURATA MANUFACTURING CO

EC:

IPC: H01L23/02; H01L23/04; H01L23/02 (+2)

Publication info: JP11163181 - 1999-06-18

**6 ELECTRONIC COMPONENT ENCAPSULATING PACKAGE** 

Inventor: SHIMA TAKESHI; SUGIMOTO TETSUHIRO

Applicant: TOMOEGAWA PAPER CO LTD

EC:

IPC: CO9J9/00; CO9J11/04; H01L23/10 (+9)

Publication info: JP11145337 - 1999-05-28

7 ELECTRONIC CIRCUIT BOARD AND VIA HOLE FILLING METHOD

Inventor: SAGAMI YOSUKE

Applicant: DEKUSUTAA KK

EC:

IPC: H05K1/11; H05K3/42; H05K3/00 (+5)

Publication info: **JP11008454** - 1999-01-12

8 METHOD OF MANUFACTURING ELECTRONIC PARTS PACKAGE

**Inventor: KOMATSU TAKATSUGU** 

Applicant: NIPPON MICRON KK

EC:

IPC: H01L23/12; H01L23/12; (IPC1-7): H01L23/12

Publication info: JP9289262 - 1997-11-04

SURFACE MOUNT PIEZOELECTRIC DEVICE

Inventor: UNNO YUKIHIRO

Applicant: MEIDENSHA ELECTRIC MFG CO LTD

EC:

IPC: H03H9/02; H03H9/05; H03H9/10 (+5)

Publication info: JP9252230 - 1997-09-22

10 SEALING METHOD OF ELECTRONIC-COMPONENT HOUSING CONTAINER

Inventor: NOMOTO KOICHIRO; KOBAYASHI YOJI

Applicant: KYOCERA CORP

EC:

IPC: H01L23/02; H01L23/04; H01L23/10 (+4)

Publication info: JP8204046 - 1996-08-09

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| substrate electronic moisture  |
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| cover lid top resin  |
| AND  |
| through hole via   |
| . AND  |
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| Date of public       | ation of application e.g.19980401 - 19980405                                       |                   |  |  |  |  |  |
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